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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,540	10/17/2005	Uwe Krauss	1356-00025-US	4127
23416 7590 12/27/2007 CONNOLLY BOVE LODGE & HUTZ, LLP P O BOX 2207 WILMINGTON, DE 19899			EXAMINER ROBINSON, CHANCEITY N	
			ART UNIT 4191	PAPER NUMBER
			MAIL DATE 12/27/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/553,540

## Applicant(s)

KRAUSS ET AL.

## Examiner

CHANCEITY N. ROBINSON

## Art Unit

4191

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SI/309)
- Paper No(s)/Mail Date 10/17/2005
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_

**Method for the Production of Photopolymerizable, Cylindrical, Continuous Seamless Flexographic Printing Elements, and Use thereof for the Production of Cylindrical Flexographic Printing Forms**

Examiner: Chanceity Robinson S.N. 10/553,540 Art Unit: 4191 December 11, 2007

***Priority***

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-18 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. Evidence that claim 1-18 fail to correspond in scope with that which applicants regard as the invention is based on the inclusion of "measured according to DIN EN 1943" in claim 3. Applicant's use of the aforementioned phrase can be construed to be a part of the claim invention.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

a. A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cushner et al. (US 5,916,403) in view of Schober et al. (US 4,758,500).

Regarding claim 1, Cushner et al. teach a method (process) for forming a seamless cylindrical photosensitive element, the printing element comprises a photopolymerizable layer (material), which comprises an elastomeric binder (butadiene/styrene thermoplastic-elastomeric block copolymers), at least one monomer (single or mixture of ethylenically unsaturated monomers i.e. acrylate and methacrylate mono- and polyesters of alcohols and polyols) and an photoinitiator (free-radical initiator i.e. aromatic ketones or substituted or unsubstituted quinones), to the outer surface of a sleeve (hollow cylinder) and joining the layers ends by calendering through a variety of steps (abstract; column 1, lines 33-37; column 1, lines 66 - column 2, lines 5; column 3, lines 5-22; column 13, lines 64- column 15, lines 27).

Regarding step (a & f), Cushner et al. teach a polymerization layer (printing element of the sleeve) formed on a film (a laminate with a photopolymerizable material and a substrate film (i.e. polyester film (coversheet)), which the film can be peeled off (removed) from the layer (column 18, lines 13-24, and 32-34; example 1).

Regarding step (c-e & g), Cushner et al. teach to cut the printing element's sleeve edges (laminate) into sizes, a hollow cylinder (sleeve) is placed onto a rotatably mounted support cylinder (mandrel with calender rolls) and screwed in with a drill (locking it thereon), to an outer surface of the photopolymerizable layer of the element was spray coated with an adhesive to form a release layer to the hollow cylinder (sleeve), the edges of the printing element at a given temperature determined from the

composition of the photopolymerizable layer by surfacing the layer onto the hollow cylinder (sleeve) into contact with a rotating mandrel with calender roll until the edges are joined (example 1-8).

Regarding step (h), Cushner et al. teach the hollow cylinder (sleeve) can be removed from the support the cylinder (column 19, lines 3-6).

However, Cushner et al. does not teach cutting the edges to be joined to size by means of bevel cut, which is disclosed in steps (b) and (e) in the present application. Schober et al. disclose a diagonal cut at the edges of the printing plate or printing elements to be joined (column 3, lines 24 -27, 55-65; figure 1 and figure 3, claim 2). At the time of invention, it would have been obvious to one of ordinary skill in the art to make a bevel cut to the printing element taught by Cushner et al. in order to make a seamless printing element. The suggestion/motivation would have been to obtain a seamless flexographic printing material with a neat, seamless joint between the ends of cylindrical flexographic print element to be connected using a reasonable amount of outlay and avoiding a visible distortion of the final printed product in the seam region.

Regarding claims 2-3, Cushner et al. teach multiple layered sleeves include an adhesive or tape which are two-ply layered or double-sided, with static shear strength (column 18, lines 26-29). Furthermore, claim 3, as discussed above, Cushner et al. does not appear to explicitly disclose the state shear strength at the given time and temperature, by said applicant. However, it can be inherent that properties of the prior art and the applicant are the same. A reference which is silent about a claimed invention's features is inherently anticipatory if the missing feature is necessarily

present in that which is described in the reference. Inherency is not established by probabilities or possibilities. In re Robertson, 49 USPQ2d 1949 (1999). Applicant is advised to submit other information with respect to the Cushner's adhesive properties, if it is shown to be patentably distinct from the instant invention.

Regarding claim 4, Cushner et al. teach a peelable film, on the side of the layer which faces the substrate (support) film (column 18, lines 13-24, and 32-34; example 1-8).

Regarding claim 7, Cushner et al. teach a coated mandrel which rotates in the direction of (E) during calendaring, as so the applicant claim the same rotational direction (7) (figure 2A, 2B, and 3, column 9, lines 45 -51).

Regarding claim 8, Cushner et al. teach the plate surface during calendaring is from a range of 90 to 180°C (column 8, lines 28-37, examples 1-8).

Regarding claim 9, Cushner et al. teach a support cylinder is an air cylinder i.e. a cylinder place inside/outside of a vacuum (column 16, lines 20-36; example 1-8).

Regarding claim 10, Cushner et al. teach (step i) digitally imagable layer (in situ masks) is applied to the photopolymerizable layer (column 15, lines 45-57).

Regarding claim 11, Cushner et al. teach a digitally imagable layer (in situ mask) from the group disclose by the applicant, one in which is transparent to actinic radiation (column 15, lines 50-66; examples 1-8).

Regarding claim 12, Cushner et al. teach a product (cylindrical, continuously seamless photopolymerizable flexographic printing element) by the process of claim 1, by said applicant (examples 1-8).

Regarding claim 13, Cushner et al. teach a said product have a digitally image layer (mask) and obtainable by the process of claim 10, by said applicant (column 15, lines 45-57; examples 1-8).

Regarding claim 14, Cushner et al. teach the use of the a digitally imagable cylindrical printing element is used for the production of the seamless printing plates, in which the mask is recorded on imagewise, the photopolymerizable layer is exposed to actinic light through the mask formed and unexposed parts of the layers are removed in the development step (column 15, lines 67- column 16, lines 53; examples 1-8).

Regarding claim 15, Cushner et al. teach the exposed layer is carried out by a solvent i.e. aqueous solution (column 16, lines 53-column 17, lines 7).

Regarding claim 16, Cushner et al. the exposed layer during the development stage is carried out thermally (column 17, lines 17-21, examples 1-8).

Regarding claim 17, Cushner et al. the printing plates, photopolymerizable layer is completely crosslinked with actinic light and a printing relief is engraved into polymerizable layer by means of a laser.

6. Claim 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cushner et al. (US 5,916,403) and Schober et al. (US 4,758,500) as applied to claims 1-17 above, and further in view of Bode et al. (US 2002/0018857 A1) .

Cushner et al. and Schober et al. do not appear to explicitly disclose the laser or lasers properties as defined in claim 18. Bode et al. teach a method for the use of the flexographic printing element for the production of continuously seamless flexographic

printing plate comprising of a photopolymerizable layer which is engraved by a laser, wherein the laser or laser have an absorption in the wavelength range between 750 to 20000 nm [0041, 0048, 0055-56]. Bode et al. teach more specifically, laser which are carbon black (inorganic pigments), merocyanine dyes, polysubstituted phthalocyanine compounds, or cyanine dyes. Therefore, it is obvious to one of ordinary skill in the art to use a laser with a wavelength ranging from 750 to 20000 nm onto the process of Cushner and Schober, because Bode teaches the use of a laser, which has an absorption range overlaps the claimed range in the present application.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHANCEITY N. ROBINSON whose telephone number is (571)270-3786. The examiner can normally be reached on Monday to Thursday: 7:30 am-5:30 pm eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dah-Wei Yuan can be reached on (571)272-1295. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 4191

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/Dah-Wei D. Yuan/  
Supervisory Patent Examiner, Art Unit 4191